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Sexaul Assault Prevention Programs: In Review

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Abstract

'Sexual assault in the United States is a 'prevalent and complicated problem. Many different researchers have attempted to design prevention programs aimed at reducing the prevalence of sexual assault. However, little empirical research has been conducted to determine the effectiveness of these programs. Studies on sexual assault prevention program studies published between 1990 and 2005 were reviewed. Information is provided on the gender of program participants, prevention methods, assessment measures, and study designs. Conclusions and suggestions for future research are also;, included.

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SEXUAL ASSAULT PREVENTION PROGRAMS:

IN REVIEW

A THESIS

SUBMITTED TO THE FACULTY

OF

SCHOOL OF PROFESSIONAL PSYCHOLOGY

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FOREST GROVE, OREGON

BY

SEAN DODGE

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OF

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Abstract

Sexual assault in the United States is a prevalent and complicated problem. Many different researchers have attempted to design prevention programs aimed at reducing the prevalence of sexual assault. However, little empirical research has been conducted to determine the effectiveness of these programs. Studies on sexual assault prevention program studies published between 1990 and 2005 were reviewed. Information is provided on the gender of program participants, prevention methods, assessment measures, and study designs. Conclusions and suggestions for future research are also included.

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Sexual Assault Prevention Programs: In Review

The rate of sexual assault in the United States is alarming. In 1987, Koss, Gidycz, and Wisniewski published a groundbreaking study that found that 53.7% of college women in a national sample experienced some form of sexual victimization; 27.5% reported experiencing rape or attempted rape. More recent studies have found similar numbers (e.g., Breitenbecher & Scarce, 1999; Hanson & Gidycz, 1993; Gidycz, Layman et al., 2001). Koss et al. also found that roughly 25% of men reported using some form of sexual aggression and roughly 8% admitted to committing rape or attempted rape. Other studies have found similar or even higher numbers of male sexual aggression (e.g., Berkowitz, 1992; Gidycz, Layman et al., 2001; Stephens & George, 2004). College-aged women appear to be up to three times more likely to be victims of sexual assault than any other female age group (Gidycz, Hansen, and Layman, 1995; Koss et al.; 1987; Pinzone-Glover, Gidycz, & Jacobs, 1998).

The necessity of sexual assault prevention programs should be evident. Although the behavior exhibited by rape survivors vary (DelTufo, 2002), common symptoms include physical or somatic complaints such as headaches, fatigue, sleep disturbances, gastrointestinal irritability, startle reactions, muscle tension, sexual disturbances, difficulty with menstrual period, difficulty swallowing, soreness, and eating problems (Burgess & Holstrom, 1974; Burgess, 1983; Frazier & Borgida, 1985; DelTufo, 2002; Gaffney, 2003). Emotional symptoms include shock, fear, humiliation, denial, withdrawal, fear of violence and death, fear of men, fear of being alone, reliving the assault in their mind, self-blame, phobias, insomnia, severe depression, post-traumatic

stress disorder (PTSD), and suicidal ideation (Brener, McMahon, Warren, & Douglas, 1999; Burgess & Holstrom, 1974; DelTufo, 2002; Kyker, 2005). As Kyker (2005) pointed out, many rape survivors never fully recover from the assault.

A general definition of rape and sexual assault was provided by Abbey and McAuslan (2004):

Rape is typically defined as attempted or completed vaginal, anal, or oral sexual intercourse obtained through force, through the threat of force, or when the victim is incapacitated and unable to give consent. Sexual assault is a more inclusive term that covers a range of sex acts, including physically forced sexual contact (e.g., kissing or touching), verbally coerced intercourse, and any acts that constitute rape.

Historically, sexual assault has been conceptualized as an act committed by a stranger.

However, recent studies suggest that survivors of sexual assault, especially college-aged women, are more likely to know their assailant (Davis & Liddel, 2002). Abbey and McAuslan (2004) found that all males involved in their study who acknowledged committing some form of sexual assault stated they knew their victim.

Current prevention programs vary in many different ways. Some programs are solely with females, others with males, and still others with both (mixed-gender) (Lonsway, 1996). Programs also differ on the type of prevention, with some programs focusing on cognitive aspects and others on emotional/affective aspects. Programs are implemented in many different ways including didactic presentation, interactive methods, videos, discussion groups, and theatrical performances. Programs also vary on the desired outcome. Some programs aim for cognitive change evidenced by an increase in knowledge, while others aim to increase empathy, attitudes, beliefs, or behavioral

intentions. Obviously, the ultimate goal is to decrease the incidents of sexual assault; however this criterion is not often assessed (Schewe & O'Donohue, 1993).

Several key terms are commonly used in the sexual assault prevention literature and deserve mention:

Rape myth is a term that has been common in the literature for over 20 years. Lonsway and Fitzgerald (1994) defined rape myths as "attitudes and beliefs that are generally false but are widely and persistently held, and that serve to deny and justify male sexual aggression against women." (p. 134) Examples of rape myths include "no" means "yes", women are "asking for it" by wearing provocative clothing, only virgins can be raped, women who "tease" deserve to be raped, women who are raped are generally promiscuous or have bad reputations, a woman who goes home with a man or allows a man buy her dinner owes the man sex, women often make false claims of rape, women are motivated to make claims of rape because of jealousy, guilt, embarrassment, or financial incentive, a man is justified in forcing sex on a woman if she makes him sexually aroused, women derive pleasure from being victimized, a good woman would do anything (including die) to avoid being raped, and married women can not be raped by their husbands (Boeschen, Sales, & Koss, 1998; DelTufo, 2002; Towbridge, 2003).

Victim empathy is a common goal of prevention programs and is meant to increase participants' empathy for rape survivors. Victim empathy has been defined as the "cognitive-emotional recognition of a victim's pain and trauma" (O'Donohue, Yeater, Fanetti, 2003, p. 517).

Adversarial sexual belief was first defined by Burt (1980). Adversarial sexual beliefs refer to an "expectation that sexual relationships are fundamentally exploitative,

that each party to them is manipulative, sly, cheating, opaque to the other's understanding, and not to be trusted" (Lonsway, & Fitzgerald, 1994, p. 218)

Rape Supportive Attitudes is commonly used as a general term that can encompass acceptance of rape myths, lack of victim empathy, and negative or stereotyped attitudes towards women. It is generally believed that men who have more rape supportive attitudes are more likely to engage in sexually aggressive or coercive behavior (e.g., Aberle & Littlefield, 2001; Burt, 1980; Humphrey & Kahn, 2000; O'Donohue, Yeater, & Fanetti, 2003).

Some common assessment devices used in the literature also deserve a brief review. For a more thorough analysis, see Lonsway and Fitzgerald (1994).

Rape Myth Acceptance Scale (RMAS; Burt, 1980) is designed to assess the level of acceptance of rape myths. The scale consists of 19 items that are presented in a 7-point Likert format. Burt reported a Cronbach's alpha of .87 (Aberle, & Littlefield, 2001; Lonsway, & Fitzgerald, 1994).

Sexual Experiences Survey (SES; Koss & Oros, 1982) consists of 10 items and is used to determine the participants' previous involvement in sexually aggressive behavior. Specifically, it is meant to assess men's experiences of sexual aggression and women's experiences of sexual victimization. Research has demonstrated that the SES has an internal consistency of .73 (Aberle & Littlefield, 2001; Forbes & Adams-Curtis, 2001).

Attitudes Toward Rape Scale (ATR; Field, 1978) is a 32-item scale presented in a 6-point Likert format. Factor analysis has revealed eight major factors of the ATR: women's responsibility in rape prevention; sex as motivation for rape; severe punishment for rape; victim precipitation of rape; normality of rapists; power as motivation for rape;

favorable perception of a woman after rape; and resistance as woman's role during rape. Field labeled some of these as "pro-rape" and others "anti-rape." Lower bound reliability has been reported at .62 (Lonsway, & Fitzgerald, 1994)

Attitudes Toward Women Scale (ATWS; Spence & Helmreich, 1978) is a scale meant to measure attitudes regarding women's rights and roles. It consists of 25 items on a 4-point Likert scale. Cronbach's alpha has been reported as high as .90 and test-retest reliability has reported at .87 (Forbes & Adams-Curtis, 2001).

Rape Empathy Scale (RES; Deitz & Byrnes, 1981) is a measure meant to assess the degree to which one empathizes with either the victim or perpetrator. The assessment consists of 19 items that are each presented with two choices. Once a choice is made, the degree to which one agrees with the choice is then rated on a 7-point Likert scale. Internal consistency has been reported at .84 (Pinzone-Glover, Gidycz, & Hanson, 1998).

Despite the fact that there appear to be many prevention programs in use on college campuses, there is limited information available on their effectiveness (Lonsway, 1996; Schewe, & O'Donohue, 1993a). The purpose of this paper is to review published studies on sexual assault prevention programs from 1990 to 2005 in order to identify effective strategies, discuss common shortcomings, and help guide future research. Only published studies written in English and conducted in the United States that specifically targeted sexual assault prevention were included in the review. Thus, programs that targeted more general areas such as interpersonal violence, anger management, or communication skills not specific to sexual assault were not included.

Prevention Programs Conducted with College Males

Berg, Lonsway, and Fitzgerald (1999) attempted to assess the effectiveness of using empathy-induction techniques on college males. The researchers placed participants in one of three treatment conditions: one group listened to an audiotape of a female describing her assault by a man that she knew; the second group listened to a male describe his sexual assault by a man that he knew; and a third group listened to some factual information regarding sexual assault. Results indicated that 2 weeks following the prevention there were no differences between the two groups on level of victim empathy or rape supportive attitudes. One troubling finding was that the female audiotape group actually reported a greater likelihood of committing rape and more endorsement of rape-supportive attitudes when compared to the other two groups. The researchers questioned whether males' empathy can be increased through prevention programs. The researchers also expressed concern about the possibility that males who listened to the female audiotape may have found the information sexually arousing, thus having an adverse effect. Unfortunately, a pretest was not used and therefore changes across time could not be measured. Other limitations included a small sample size and no long-term follow-up assessments.

Earle (1996) reported findings from three different acquaintance rape prevention programs conducted at three different colleges, with a fourth college serving as a comparison group. The first treatment group used an all-male, peer-facilitated interactive program conducted in small groups. The second treatment group was conducted by a professional and included both males and females in an interactive small group program. The third treatment group was also conducted by a professional and included both males

and females, but this prevention used a didactic presentation in a large group setting. Despite the fact that treatment conditions two and three included female participants, only male participants were included in the analysis. Results indicated that the first treatment group reported more liberal attitudes toward women than the comparison group, meaning fewer adherences to stereotyped gender roles. Group 1 also reported a reduced desire to rape. Group 3 on the other hand indicated less liberal attitudes on a subscale where participants rated the severity of sexual assault crimes. Unfortunately, there were too many differences between the three treatment conditions to allow for a true comparison. In addition, the article provided only limited information on the content of each of the prevention programs. Another limitation of this study was the lack of a long term follow-up.

Gilbert, Heesacker, and Gannon (1991) conducted a study using the Elaboration Likelihood Model (ELM; Petty & Cacioppo, 1986) as a theoretical foundation. According to ELM theory, when recipients of information consider the message personally relevant, engage in favorable thoughts about the message (as opposed to feelings such as defensiveness), and are able to hear and attend to the information, the message is better incorporated, thus leading to more stable attitudinal and behavioral change; this is referred to as *central route processing* (Gidycz, Lynn et al., 2001; Heppner et al., 1999; Petty & Cacioppo, 1986). This study assessed the effectiveness of a psychoeducational prevention program with college males from 2 universities. Results indicated that the program was effective at reducing rape supportive attitudes immediately following the prevention. The study also included a 1-month follow-up assessment in which the participants were contacted by phone and were told that a

student group was organizing a women's safety program. The participants were not told that this was related to the study until debriefing. Results indicated that those who participated in the prevention were more likely to listen to the information and were more likely to say favorable things about the women's safety program. However, they were not more likely to volunteer their time.

The researchers also found partial support for the components of ELM; specifically, they found that motivation to hear the message, perceived ability of the presenter, and favorability of personal thoughts during the presentation to be significant predictors of attitude change. The researchers conclude that this study illustrates the effectiveness of an ELM model in both designing prevention programs and explaining change factors. A potential limitation of the study is that the sample endorsed fewer rape supportive attitudes at pretest than pretest results from similar studies. Therefore, the generalizability of the results is somewhat unclear.

Schewe and O'Donohue (1993b) compared the effectiveness of two types of prevention programs. Distinguishing this study from others that focused on a general college population, the researchers initially screened male undergraduate students in order to identify "high risk" males. Another unique aspect of this study was the inclusion of the Rape Conformity Assessment (RCA) (see Shewe & O'Donohue for a description). This behavioral assessment is meant to measure participants' ability to resist conforming to rape supportive attitudes and has demonstrated good reliability and validity. Both programs consisted of a 45-min video. The video for the first group was focused on increasing victim empathy by showing sexual assault victims tell their stories. Participants were asked to imagine the emotional reactions these women likely felt and

were also asked to imagine themselves as victims of rape. The second group watched a video that focused on providing factual information regarding sexual assault such as statistics and definitions of sexual assault. The video also included information on rape myths.

Results suggested that the empathy group demonstrated more empathy when compared to the other treatment group and the control group. Interestingly, the empathy group also showed less acceptance of rape myths when compared to the other groups. No differences were found between the two treatment groups on measures such as likelihood of committing rape, acceptance of interpersonal violence, or adversarial sexual beliefs. Both groups reported that the preventions were useful. Overall, it appears that the empathy group was more effective. However, high risk males still had more acceptance of rape myths when compared to “normal” males. The researchers questioned whether high risk males actually had any changes in attitudes or whether they were responding to demand characteristics. Unfortunately, neither prevention produced significant changes on the behavioral measure (RCA), suggesting that while the preventions may have been effective at changing attitudes, they did not bring about behavioral change. Strengths of this study include the identification of high risk males and the inclusion of behavioral outcome measures.

In 1996, Schewe and O'Donohue published a similar study, comparing two short-term prevention programs. As with the previous study, the researchers once again screened for high risk males. Both of the preventions were conducted by showing a 50-min video to the participants, followed by a brief behavioral exercise wherein participants were asked to create an argument to discourage males from using sexually coercive

behaviors. The Rape Supportive Cognitions (RSC) prevention was a strict cognitive prevention that targeted rape-supportive attitudes. The other prevention, The Victim Empathy, Outcome Expectancy (VE/OE) prevention aimed to increase the participants' empathy for sexual assault victims and to decrease problematic rape outcome expectancies (e.g. the victim will enjoy it). As with the previous study, the RCA was also used as a behavioral measure.

Results suggested that, unlike the previous study, the RSC group had significantly less acceptance of rape myths, less attraction to sexual aggression, and less acceptance of interpersonal violence when compared with the control group. The VE/OE group demonstrated significantly less acceptance of interpersonal violence and an increase in empathy for sexual assault victims when compared to the control group. When comparing scores to available norms, the researchers found that the RSC group moved from "deviant" to "non-deviant" scores on three of the five outcome measures. It should be noted that a few of these outcome measures have poor psychometric properties. Overall, the results appear to lend more support for the RSC group. As with the previous study, however, neither prevention produced significant changes in the behavioral measure (RCA). Advantages of this study were the use of high-risk males, use of behavioral measures, multiple outcome measures, and a measure of clinical significance. Limitations include the use of assessments with poor psychometric properties and the lack of a long-term follow-up assessment.

O'Donohue, Yeater, & Fanetti (2003) found some encouraging results from a study that examined the effectiveness of a rape prevention program. In their study, the authors used a cognitive model aimed at changing irrational beliefs and faulty

assumptions regarding rape. In the experimental group, participants watched a video aimed at dispelling rape myths, increasing victim empathy, and challenging unhealthy outcome expectancies. In the comparison group, participants watched a more typical information-based rape video. The authors found that those in the experimental group showed reduced acceptance of rape-supportive attitudes, rape-myths, and more empathy towards rape survivors than did those participants in the comparison group. Further, participants in the experimental group with a self-reported history of sexually coercive behavior showed greater reductions than those in the comparison group, indicating that the treatment group was also effective for “high risk” males. It should be noted that there was no control group used in this study. Also, this study did not utilize a follow-up assessment.

There has been ample research to suggest that the use of alcohol is a major contributing factor for sexual assault. Estimates suggest that at least 50% to 70% of sexual assaults involve alcohol (Abbey & McAuslan, 2004; Mohler-Kuo, Dowdall, Koss, & Weschler, 2004; Ullman, Karabatsos, & Koss, 1999). However, few studies have specifically assessed for and targeted alcohol use and alcohol expectancies. One study that did address this was conducted by Stephens and George (2004), who evaluated the effectiveness of an anti-rape video. The researchers also examined the effects of alcohol expectancies on outcomes related to sexual assault. The researchers screened participants for previous use of sexually coercive behavior and identified those participants as sexually coercive (SC); those who did not previously endorse sexually coercive behavior were identified as non-sexually coercive (NC). The prevention program consisted of a 28-min video that included interviews with sexual assault survivors and psychologists

discussing issues around sexual assault. Statistics were also discussed, as were the effects of alcohol on sexual assault.

Results found that the prevention was not effective in changing the attitudes of SC men, but was somewhat effective for NC men. With alcohol expectancies, NC men in the treatment group scored significantly lower than NC men in the control group on items relating to sexual risk taking and disinhibition resulting from alcohol consumption. No differences were noted for SC men. This study illustrates the need to identify high-risk males. Results indicated that men with a history of sexually coercive behavior were unresponsive to the prevention. Thus, this prevention was only effective on men least in need. This study is also noteworthy in that it examined effects of alcohol expectancies. Limitations of this study include the lack of a follow-up assessment and a relatively small sample size.

Several researchers have suggested that fraternity members may be at a higher risk for committing sexual assault (e.g. Chaote, 2003; Davis & Liddel, 2002; Foubert, 2000; Humphrey & Kahn, 2000; Martin & Hummer, 1989). Choate (2003) conducted a descriptive pilot study to explore the effectiveness of the Men Against Violence (MAV) model on male fraternity members. This model has four major components: increase awareness, participate in community action, provide education, and provide support for victims and perpetrators of sexual assault. In this study, a male undergraduate involved in the MAV program co-facilitated a prevention program with a female counseling graduate student. The program provided information on statistics, legal definitions including the use of alcohol or drugs, and rape myths. Immediately following the prevention the researchers asked participants to fill out questionnaires designed to illicit their responses

to the program. In general, participants stated that they found the program useful, enjoyable, and that it was informative. Participants specifically mentioned that the information regarding legal definitions of sexual assault relating to drug or alcohol use was particularly informative. Many participants stated that they would recommend the program to other Greek members. Interesting to note, although several participants found the program useful, many of them stated that the program would not change their behavior, as they did not consider themselves at risk for committing sexual assault in the first place. However, others did report that they would be more likely to ensure "sober consent." The authors suggest that these results are promising and demonstrate the need to educate fraternity members about sexual assault. They also point out that because of the descriptive nature of the study, no information can be deduced about the program's effectiveness at changing behaviors or attitudes. They suggest a qualitative study be conducted that includes controls for social desirability and follow-up assessments.

A study done by Davis & Liddel (2002) also examined the effectiveness of a prevention program aimed at fraternity members. The authors presented information that suggests male fraternity members may be a high-risk population for participating in sexually coercive behaviors. The authors of this study collected several video clips from popular media that displayed gendered messages. After the video, all-male discussion groups talked about issues such as concerns over being perceived as feminine, legal ramifications of sexual assault, peer pressure, and how to ensure consent. The authors also used a traditional rape education group (unspecified) and a control group. The results indicated that participants in both the experimental group and traditional rape education group scored more desirably on measures of rape myth acceptance and understanding of

consent. Unfortunately, a six-week follow-up showed that the changes were not maintained. The authors also found a moderate relationship between social desirability and the outcome measures. The researchers suggested that social desirability may have played a role in the immediate posttest scores. A limitation of this study was the lack of a behavioral outcome measure.

Foubert and colleagues have conducted a number of studies with fraternity members. In one study, Foubert and Marriott (1997) conducted a prevention program using trained male undergraduate students to implement the program to a fraternity pledge class. Participants were told that the program was a workshop on how to help sexual assault survivors in order to reduce potential defensiveness on the part of the male participants. The program defined rape and showed a video where a man being raped was graphically described. Using a video that depicted a male victim was done in order to increase victim empathy. The facilitators also provided information on how to assist a sexual assault survivor.

Results indicated that the program was effective at reducing participants' acceptance of rape myths at the immediate posttest. At the 2-month follow-up, rape myth acceptance significantly increased; however the follow-up scores were significantly lower than pretest scores, indicating that the program did produce change that lasted at least 2 months. 59% of the program participants indicated that they were less likely to employ sexually coercive behavior after participation in the program. Interestingly, the researchers also observed that the control group had a significant reduction in rape myth acceptance from pretest to follow-up. The researchers suggested that this change may be the result of testing effects. They conclude that their study lends support for the use of a

peer education program for fraternity members. They noted a few limitations of their study including assessing the treatment and control groups at different times, a large attrition rate at the follow-up assessment, and the lack of a behavioral outcome measure.

Foubert and McEwen (1998) followed up on the Foubert and Marriot (1997) study, this time adding an increased the sample size, using ELM theory, assessing the effects of giving a rape acceptance measure at pretest, and measuring behavioral intent to rape. The researchers randomly assigned six fraternities to three conditions: a pretest and posttest prevention group; a posttest only prevention group; and a control group. The program used appears to be the same one described above in Foubert and Marriot, using a male-on-male sexual assault video to introduce issues regarding sexual assault as well as providing statistics and definitions of sexual assault. Once again, the researchers found that the program was effective at reducing fraternity member's rape myth acceptance immediately following the prevention. In addition, the researchers found that giving the pretest did not affect the posttest results. Results indicated that the treatment groups' behavioral intent to rape decreased from pretest to posttest. However, similar to the previous study, the untreated control group surprisingly exhibited a decrease in acceptance of rape myths and behavioral intent to rape. Therefore, there were no differences between the control and treatment groups at posttest. The researchers also noted that higher levels of central route processing, as described in ELM, was related to lower levels of rape myth acceptance.

The researchers concluded that these studies support the use of a prevention program that addresses male participants as helpers for sexual assault survivors. The researchers also conclude that these studies demonstrate the utility of an all-male

program. Limitations of this study include the lack of a follow-up assessment. In addition, although they did measure behavioral intent, there was still no measure of actual behavioral change.

Foubert (2000) conducted an additional study of his all-male peer education program with fraternity members. Like the Foubert and McEwen (1998) study, the researcher assessed behavioral intentions to rape in addition to attitudes regarding sexual assault. Also, the researcher included a measure of sexually coercive behavior at a 7-month follow-up assessment. The author's findings suggest that participation in the program greatly reduced participants' acceptance of rape myths and intent to rape immediately following the prevention. The researcher also found that these reductions were still significant at the 7-month follow-up. However, there was no evidence of change in sexually coercive behavior when compared to the control group. This study demonstrated that the peer-education program was effective in changing attitudes and intentions and that these changes can be maintained over 7 months. However, there was no evidence of change in actual behavior. Advantages of this study include a behavioral outcome measure and a 7-month follow-up. Limitations of the study include the use of volunteer participants that only accounted for one-third of the fraternities on the campus and the absence of comparison findings between the treatment and control group at the immediate posttest.

An ELM theory-based study conducted by Heppner, Neville, Smith, Kivlighan, & Gershuny (1999) was designed to address several of the concerns of previous research. One concern involved the length of the treatment, with several studies citing that a one-time prevention may not be enough. The authors implemented a program that consisted

of three separate preventions, presented one week apart. The three preventions focused on different areas: the first session was aimed at cognitive processes by providing statistics and other information regarding rape; the second was aimed at affective processes by having a panel of rape survivors and friends of rape survivors talk with the participants and answer questions; and the third session was aimed at behavioral processes by using two role-plays, with the first depicting a coercive date rape scenario and the second role-play depicting a male trying to comfort and help a friend who had recently been raped. The participants were asked to help re-write the first scenario in a way that prevented the sexually coercive behavior.

To address a common problem regarding the lack of culturally diverse participants, the authors actively recruited both Black and White fraternity members to participate in the study. The authors also utilized two treatment conditions, with one of the conditions deliberately infused with culturally relevant material.

Using a Hierarchical Cluster Analysis (HCA), the researchers observed three response patterns from pretest to a 5-month follow-up: *improving*, indicating a significant decrease in rape supportive attitudes over the three testing periods (roughly 32% of participants); *deteriorating*, indicating a significant increase in rape supportive attitudes across the three testing periods (roughly 30% of participants); and *rebounding*, indicating a high score of rape supportive attitudes at pretest, low scores at posttest, and a return to high scores at the follow-up (roughly 39% of participants). Post Hoc analysis revealed that participants in a treatment condition were more likely to be in the improving cluster (16 out of 18 participants).

The authors also found that there appeared to be some positive effects from using the culturally relevant information. Specifically, the researchers found that Black men in the culturally specific treatment condition reported more engagement than Black men in the “colorblind” treatment condition. They authors suggest that future research should include culturally specific information and that further examination should be done regarding the different response patterns. This study illustrated the need for detailed follow-up assessments and the potential of culturally-specific information. Advantages of this program include the use of power analysis, culturally diverse participants, the use of multiple preventions, and the inclusion of a 5-month follow-up. Limitations include a high attrition rate.

Prevention programs conducted with college females

Gray, Lesser, Quinn, and Bounds (1990) conducted a study aimed at evaluating the effectiveness of personalizing an acquaintance rape prevention program. The researchers conducted the study with undergraduate female students and placed them in a personalized acquaintance rape program or a comparison group. Each program consisted of discussion groups, role plays, and information on rape myths. The personalized prevention included local statistics of sexual assault and the comparison group was given national statistics. Participants completed questionnaires assessing perception of vulnerability and high-risk behaviors. Results indicated that women who participated in the personalized prevention program reported less intent to engage in high-risk behaviors than women in the comparison group. Also, results suggested that unmarried women in the personalized prevention reported a greater perception of vulnerability than unmarried women in the comparison group. Limitations of this study included the use of assessment devices with no established psychometric properties and no follow-up.

Yeater and O'Donohue (2002) conducted a study that evaluated the amount of information previously victimized and non-victimized female students could learn in an information-based prevention program. The program had three sections: 1) rape facts and myths; 2) risk factors and risk perception; and 3) risk-reduction response strategies. For each phase, participants were given a packet of information and were asked to read through the packets. Upon completion, they were given a questionnaire consisting of relevant information from the readings. Participants needed to answer 90% of the items on the questionnaire correctly before moving to the next section. If a participant did not

answer 90% correctly, they were given feedback on the incorrect items and were then asked to re-take the questionnaire. To assess for previous knowledge, a control group was asked to take the three questionnaires without receiving the reading information. Results indicated that the women did not previously know the information presented, as the control group did not know as much as the treatment group on any of the three sections. There were no significant differences in previous knowledge based on victimization history, indicating that women who had been sexually victimized knew as much information as did women who had not been victimized. A surprising result was that women with a history of a single sexual victimization took more attempts to correctly answer the information than did women with a history of multiple victimizations. Results of this study illustrate the need for information to be presented on more than one occasion in order for participants to incorporate and understand the information. One limitation of this study was that no follow-up assessment was conducted.

Hanson and Gidycz (1993) conducted a study aimed at changing women's cognitions, behaviors, and incidents of sexual assault. The prevention program included information on rape myths, a video depicting an acquaintance rape scenario, a video modeling protective behaviors, general information on the prevention of acquaintance rape, and a group discussion. Participants completed pretest assessments, took part in either the program or a control group, and were then asked to return at the end of a 9-week academic quarter for a posttest assessment.

Results indicated that women who reported a history of sexual victimization prior to the program were significantly more likely to report a sexual victimization during the 9-week term. Researchers found that women without a history of sexual victimization

who were in the treatment group were significantly less likely than women in the control group to report sexual victimization during the 9-week semester, indicating that the program was potentially helpful for those women without a sexual assault history.

Women in the treatment group reported experiencing significantly less situational factors associated with acquaintance rape (e.g., consumption of alcohol and drugs on dates) than women in the control group. Women in the treatment group also demonstrated a greater general awareness of issues relating to sexual assault. There was no difference in the degree of sexual communication (e.g., verbally consenting to sex). This study illustrates the need to assess for prior victimization, as this variable significantly moderated program effectiveness. Perhaps one of the most disturbing findings of this study was that 57% of the women reported a history of moderate or severe sexual assault victimization. This study is one of the few in this area to report effect sizes, although the effect sizes were small. Limitations of this study include the use of a few assessment instruments with limited reliability. Additionally, all participants were freshmen or sophomore students.

Breitenbecher and Gidycz (1998) conducted a study aimed at reducing the risk of revictimization. The researchers used a modified version of the prevention program used by Hanson and Gidycz (1993). The prevention used in this study was education and discussion based and included specific information on the rates and risks of revictimization. A follow-up assessment was conducted at the end of a 9-week academic quarter. At pretest, 22% of women reported being raped since the age of 14, 7% of women reported an attempted rape, 12% reported unwanted sexual coercion, and 21% reported unwanted sexual contact. At follow-up, 22% of women reported being

victimized during the academic quarter. Women with a prior history of sexual victimization were more likely to have been revictimized during the quarter, regardless of experimental condition. In addition, there were no differences between the treatment and control groups in altering dating behaviors, sexual communication, or sexual assault awareness. The researchers also observed that women with a history of sexual victimization reported more knowledge about sexual assault than did women without a history of sexual victimization, regardless of treatment condition. These results are discouraging and suggest that an education based prevention program with college females may not be effective at reducing rates of sexual victimization. Advantages of this study include a 9-week follow-up and the use of multiple-outcome measures, including behavioral measures.

Marx, Calhoun, Wilson, and Meyerson (2001) conducted a study aimed at reducing revictimization among women with a reported history of sexual victimization. The researchers also adapted the prevention program by Hanson and Gidycz (1993), but modified the program to specifically address revictimization. Participants from two different universities took place in a 2 day prevention program, each session lasting 2 hours. The first session addressed definitions, statistics, and common effects of sexual assault. The session also included a video, discussion, and prevention strategies. The second session was focused on problem-solving, assertiveness, and communication skills.

The results were mixed. The data suggested that 27% of women in the study were revictimized during a 2-month period following the prevention, with no differences between the treatment and control group. However, closer analysis revealed that 23% of the women experienced rape revictimization, meaning that their victimization resulted in

a completed rape. Results suggested that women in the treatment group were less likely to experience a completed rape (12%) than those women in the control group (30%), thus suggesting that the program may have been effective at reducing incidents of completed rape. The researchers also found that women in the treatment group reported greater self-efficacy in using protective skills than did women in the control group. Of those women who were revictimized, women in the treatment group reported less severe symptomology following the assault than did women in the control group. Finally, the researchers included a measure of risk latency by having participants listen to an audiotape of a man and a woman in a date situation that eventually led to rape. Participants were asked to indicate when the man's sexual advances had gone too far. Results indicated that women who had been revictimized had longer response latency, indicating poorer risk-recognition skills. Strengths of this study included a 2-month follow-up assessment, a focus on revictimization, behavioral outcome measures, and the development of a treatment manual for the prevention. A limitation of this study was a small sample size.

Breitenbecher and Scarce (1999) conducted a study aimed at evaluating a sexual assault education program. The education program was conducted with college females and consisted of an hour long presentation that included statistics, information on statistics, and sex role socialization. The program was implemented at the beginning of the academic school year and follow-up assessments were done at the end of the 7-month school year. At the follow-up, results suggested that the program was effective at increasing participants' knowledge regarding sexual assault and that this information was retained. However, it should be noted that the effect size was small. Unfortunately,

results demonstrated that the program was not effective in reducing incidents of sexual assault. At the 7-month follow-up, 67% of the women reported no sexual victimization whereas 33% reported some form of victimization (rape, attempted rape, sexual coercion, or unwanted sexual contact); there were no differences between the treatment and control groups. The researchers did not find differences in program effectiveness (i.e., increased knowledge) based on whether or not participants had a previous history of sexual victimization. However, they did find that, regardless of treatment condition, women with a history of sexual assault were significantly more likely to report some form of sexual assault at the follow-up (39%) compared to women without a history of sexual assault (15%). The researchers suggest that future research should include multiple follow-ups to monitor changes over time and that follow-up assessments assess for situational factors that lead to sexual assault.

The same researchers published a second study aimed at building on the previous one. Hanson-Breitenbecher & Scarce (2001) employed similar methods but included a focus on psychological barriers to resisting sexual assault, such as concerns about feeling embarrassment, fearing rejection from men, and concerns regarding the disabling effects of alcohol. The researchers also included additional outcome measures to assess the program's effectiveness on other variables.

Similar to the previous study, the program was conducted at the beginning of an academic school year and the follow-up assessment was conducted after the 7-month school year. Similar to the previous study, pretest results indicated that the majority of women in the study (71%) had experienced some form of sexual victimization (rape, attempted rape, sexual coercion, or unwanted sexual contact) and women with a history

of sexual victimization were more likely to have been victimized during the follow-up period. In addition, follow-up results demonstrated that the program was still not effective at reducing incidents of sexual assault. However, unlike the previous study, this modified prevention program was also ineffective at producing a change in knowledge or attitudes regarding sexual assault. Comparison of pre- and posttest results revealed a significant difference in sexual communication and sexual assault knowledge in the desired direction; however, there were no differences between the treatment and control group, suggesting that program participation did not account for these changes. No changes were noted for perception of risk for sexual assault or dating behavior. The researchers suggested that a smaller sample size and the modified prevention program could explain the differences between this and the previous study.

Gidycz, Lynn et al. (2001) conducted a multi-site investigation into the effectiveness of a sexual assault prevention and risk-reduction program aimed exclusively at college females. The study was conducted at two large universities and included over 750 female participants. The researchers assessed previous sexual assault victimization prior to the study. The study also included a 2- and 6-month follow-up. The researchers based their prevention on the ELM theory and the health belief model. According to the health belief model, individuals are more likely to incorporate the information presented if they consider the health threat to be serious and acknowledge their own vulnerability.

The goals of the program were to evaluate changes in participants' rape empathy, self-blame, dating behaviors, sexual communication, victimization and re-victimization. The program consisted of a 3 hour multimedia presentation that included a didactic presentation on definitions and prevalence rates of sexual assault and several videos

aimed at raising the participants' knowledge of their own personal risk and general risk factors. This was followed by small group role-plays that modeled risk-reduction strategies and general protective behaviors.

At the follow-up assessments, participants filled out questionnaires that assessed for victimization since the prevention program. The results were mixed. The program did not appear to reduce the risk of sexual assault victimization after 2 months. However, for those women who were moderately victimized during the 2-month follow-up period, there was a reduction in victimization at the 6-month follow-up. It is possible that this finding simply illustrated a change in behaviors for those who were moderately victimized during the 2-month follow-up period and this change had nothing to do with the prevention program. Another finding was that women without a previous history of sexual victimization were the least likely to be victimized during both the 2-month and the 6-month follow-up periods. It is also worth noting that the majority of the reported assaults were categorized as moderate victimization, indicating that perhaps the program was effective at reducing the number of more severe sexual assaults. Another finding was that that 37% of women who were severely victimized during the 2-month follow-up had reported a previous victimization.

Overall, results suggest that the program was not particularly effective at reducing the rates and risks of sexual victimization for the participants, especially for those women with a previous history of sexual victimization. The results were mixed in terms of victim empathy, as only women with moderate prior victimization in the treatment group showed an increase in victim empathy. The researchers did conclude that the study lent support for the use of the ELM model, as variables associated with central route

processing were associated with reductions in sexual assault risk. The researchers argue that the findings indicate the importance of increasing programs' personal relevancy for the participants.

Prevention programs conducted with males and females (mixed gender)

Rosenthal, Heesacker, and Neimeyer (1995) did a replication of the Gilbert et al. (1991) study with a few notable differences. First, they included both male and female participants. Secondly, this study also assessed the program's effectiveness for participants who held traditional gender role beliefs. The program used was identical to the Gilbert et al. study which included arguments for rejecting interpersonal violence, statistics on sexual assault, and information on rape myths. Results suggested that this prevention was effective for both males and females. In addition, the researchers did not find a difference in program effectiveness based on traditional versus non-traditional gender role beliefs. Overall, the program appeared effective at reducing participants' acceptance of rape myths at posttest. As with the Gilbert et al. study, the researchers conducted a follow-up assessment one month later wherein participants were called by phone and were told about a women's safety program that would be implemented at the school. The participants were not told that this phone conversation was part of the study until debriefing. The results were opposite of those found in the Gilbert et al. study: those who participated in the prevention were significantly more likely to volunteer time to the women's safety program but no significant differences were found on the number of positive comments about the program nor the amount of time spent listening to information about the program. The researchers hypothesized that this may be the result of a ceiling effect, as both participants in the treatment group and control group tended to listen to the full message and reported positive comments about the program.

Harrison, Downes, and Williams (1991) conducted a study comparing two prevention programs. Participants consisted of undergraduate and graduate students enrolled in speech communication classes, a requirement for undergraduate students. A total of five sections were used in the analysis, with 4 serving as treatment conditions and one as a control group. Two of the sections participated in a program that solely consisted of a videotape depicting a series of media clips comprised of sexual themes, followed by a depiction of a typical date; the date section was meant to illustrate that common dating behaviors can often send mixed messages. Two other class sections watched the same video but also engaged in discussion groups following the video.

Results indicated that men in the treatment groups showed significant decreased acceptance of victim blaming from pretest to posttest. No significant changes were observed for women. When compared to the control group, men in the treatment groups demonstrated less acceptance of victim blaming as well as an improved accuracy of perceiving factual information. Again, no differences were noted for women, although this finding was likely due to the fact that women's scores were generally higher (in the desired direction) at pretest. No differences were noted between the two types of programs. The researchers also assessed the effects of giving a pretest and found that those sections which received a pretest showed higher scores (in the desired direction), thus suggesting a testing effect. Limitations of this study include the lack of a follow-up assessment.

Nelson and Togler (1990) conducted a study aimed at comparing two types of sexual assault prevention programs. The study was conducted with undergraduate psychology students. One group watched a 30-min video that provided information

regarding acquaintance rape, a second group read a short brochure that provided information on acquaintance rape, and a third group served as a control and read a brochure that provided information on career planning. Pretest results revealed that males held significantly more traditional attitudes toward females than did female participants and were more accepting of the use of sexual coercion than female participants. Also worth noting, there was a significant positive correlation between traditional attitudes toward women and the acceptance of sexual coercion. Posttest results revealed a significant decrease in the acceptance of sexual coercion for both males and females. This decrease was seen in all three groups (videotape, acquaintance rape brochure, and career planning brochure) indicating that neither the videotape nor the brochure were more effective. The fact that there were no significant differences between the control and treatment groups may indicate testing effects. Limitations of the study include a small sample size, the use of modified assessments with no known psychometric properties, and the lack of a follow-up assessment.

Schwartz and Wilson (1993) conducted a study to assess students' retention of information following a sexual assault prevention program. They conducted a study with freshmen students enrolled in a studying skills course during their first collegiate semester. The 50-min prevention consisted of a didactic presentation on common rape myths, definitions of sexual assault, the role of alcohol, and risk-reduction strategies. Results indicated that students in the prevention group reported a significant decrease in rape supportive attitudes from pretest to posttest, which was assessed 1 month to 6 weeks after the prevention. Posttest results revealed a significant difference for women, indicating that females in the treatment group endorsed fewer rape supportive attitudes

than women in the control group. This finding was not significant for males. Additional analysis revealed that men in the treatment group were more likely than men in the control group to have a friend confide in them about experiencing a sexual assault; this was not found for women. Also, those in the treatment group indicated greater concern regarding the issue of sexual assault than did those in the control group and program participants generally indicated that the program was useful and should be taught to all incoming freshmen students. Limitations of this study include the lack of random assignment and the use of a created outcome measure with no reported psychometric properties.

Fonow, Richardson, and Wemmerus (1992) conducted a study evaluating the effectiveness of a prevention program based on feminist theory. The program was conducted with all students enrolled in an introductory sociology course at a large Midwestern university. The researchers had some of the students view a video of the rape education workshop while other students watched and participated in the live workshop. The 25-minute program discussed rape myths, statistics concerning sexual assault, and encouraged a feminist viewpoint to conceptualize sexual assault. At pretest, the researchers noted that all participants were more likely to reject rape myths than to accept them. Also, at pretest men were likely than women to endorse more rape myths, blame the victim, have adversarial sexual beliefs, and have more conservative gender-role attitudes. Results indicated that both programs, videotaped and live, were effective at changing knowledge and attitudes in the desired direction and there were no significant differences between the two preventions. Men continued to have more undesirable attitudes and beliefs than women. The researchers concluded that the program was

particularly effective at changing attitudes and beliefs related to date rape. Specifically, the participants learned that the victim was more likely to know her attacker and that the assault was more likely to take place in a familiar setting. A major advantage of this study was the use of mandatory participation, thus limiting selection bias. Possible limitations of this study include the use of a few assessment devices with low reliability and no follow-up assessments.

Dallenger and Rosen (1993) conducted a study evaluating the effects of a human sexuality course on rape supportive attitudes. The researchers used students enrolled in an education class as a comparison group. The education class did not specifically address any issues related to sexual assault or sexuality in general. The human sexuality class addressed several issues including reproduction, intimacy, anatomy, and sexually transmitted diseases. Two of the 29 class periods were focused on issues specific to sexual assault. Results indicated that students in the human sexuality course indicated significantly less acceptance of rape myths than students in the education class. There were no observed differences on a measure of acceptance of interpersonal violence. The researchers questioned whether the statistically significant findings were actually clinically significant, as the actual difference in scores between students in the two classes was minimal. Overall, students in both courses reported minimal acceptance of rape myths. Limitations of this study include the lack of random assignment and a follow-up assessment.

Holcomb, Savage, Seehafer, and Waalkes (2002) conducted a study that was designed to measure the effectiveness of a mixed-gender date rape prevention program targeting college athletes. The authors noted that college athletes might be a high-risk

population as date rape perpetrators because of their social status. The authors were also interested in examining the effectiveness of administering the program to mixed-gender participants. The authors used a health education class that was mandatory for college athletes as the medium for delivering the prevention. They randomly selected two of the five sections of the class to the experimental group. The control sections received typical information regarding sex education that was part of the course curriculum. The two experimental groups received a specialized date rape prevention program (see Holcomb, Sarvela, Sondag, & Holcomb, 1993, for specific program information). The authors found that the rape prevention program was effective in reducing student's rape-supportive attitudes. The authors also found that there was no major difference regarding the impact of the treatment by gender. It should be noted that post-treatment assessment was done immediately following the prevention and no follow-up study was done to determine the long-term effects. The authors conclude that this prevention appeared be effective in changing attitudes regarding rape.

Klaw et al. (2005) conducted a descriptive study to investigate the effects of the Campus Acquaintance Rape Education (CARE) program. CARE is a semester long program that provides information on sexual assault and other issues from a feminist perspective, focusing on gender inequality in a social context. The CARE program also aims to train undergraduate students to facilitate rape prevention workshops. Results from student reaction papers and focus groups conducted with student CARE workshop facilitators revealed that the CARE program appeared to be effective in three general domains: increased awareness of the problems associated with sexual assault, increased emotional responses around the issues of sexual assault, and an increase in "taking

action” against sexual assault, including involvement in social activism. A limitation of this descriptive study is the use of participants who volunteered for the CARE program (e.g. selection bias).

Lonsway et al. (1998) conducted a study that evaluated the training of undergraduate students to facilitate CARE workshops. Participants in the CARE training program reported significantly less acceptance of rape myths, less adversarial sexual beliefs, and more acceptance of a feminist movement. At a 2-year follow-up, the CARE students still reported fewer acceptances of rape myths. However, the changes in adversarial sexual beliefs and support for a feminist movement were not maintained. In addition, a behavioral measure indicated that females in the CARE program were less likely to use indirect strategies to avoid men’s advances. Strengths of this study included a 2-year follow-up. Limitations include a small sample size, the use of participants who volunteered for the CARE program (e.g. selection bias), and a sample that consisted of significantly more females than males.

Lonsway & Kothari (2000) conducted a study to examine the effectiveness of a mandatory rape education program for all college freshmen at a Midwestern university. One of the authors’ main concerns was that social desirability might influence students’ responses. To counter this, the authors gave the posttest evaluations to some students immediately following the 2-hr seminar, to some students over a phone interview, and to some students enrolled in an introductory psychology course. For the latter two, the authors hoped that the relation of the questionnaires and phone calls to the seminar would be somewhat disguised. This approach allowed for a follow-up examination as the phone interviews and psychology class students were administered the questionnaires 5-months

following the first seminar. Another advantage of this approach was that, of the students contacted by phone or through a psychology course, some of them had already taken the seminar and some had not. The authors found that the students responding to the questionnaires immediately following the seminar endorsed fewer rape-supportive attitudes and acceptance of rape myths. The authors noted that while attitudes rebounded to pretest levels at the 5-month follow-up knowledge about rape seemed to be maintained. The only significant difference between students who had and had not taken the seminar was in knowledge, with students who had taken the seminar exhibiting a greater knowledge related to sexual assault. This study helped point out several important areas including the need to assess for social desirability and the need for follow-up assessment. However, the authors note that the focus of their study was not specifically aimed towards the content of the prevention program in use.

Anderson et al. (1998) conducted a coeducational prevention program and made specific efforts to make the prevention personalized and engaging. The researchers compared the effectiveness of two types of prevention programs: an interactive mock talk show program and a didactic video program. The mock talk show program consisted of a panel of individuals portraying an alleged victim, the victim's friend, the therapist of the victim, and the alleged perpetrator. Participants were encouraged to ask questions and generate discussion. Issues of rape myths and statistics were integrated into the prevention. The didactic video presentation consisted of the portrayal of an acquaintance rape and also provided statistics and information on rape myths.

Immediately following the programs, results indicated they were both effective in lessening participants' rape supportive attitudes. However, 7 weeks following the

prevention, a rebound effect was observed wherein the treatment groups' scores were no longer significantly different when compared to the control group. The researchers also noted that individuals who indicated they knew someone who had been victimized by sexual assault reported significantly less rape supportive attitudes at pretest, posttest, and follow-up. In addition, females indicated significantly less rape supportive attitudes at all three assessment points. The researchers point out that their findings did not lend support to the effectiveness of a more interactive prevention as opposed to a didactic presentation. They also noted the importance of making the information personalized, as knowing a victim of sexual assault appears to have a strong relationship with less rape myth acceptance. Possible limitations of this study include the absence of any behavior-based or knowledge-based assessments.

Lenihan et al. (1992) conducted a study to evaluate the effectiveness of a sexual assault prevention program. Participants were students enrolled in an introductory health class. The program consisted of a didactic presentation that included information on statistics and definitions of sexual assault, a video presentation, and a personal account of a sexual victimization by a sexual assault survivor. Results demonstrated no change in rape supportive attitudes for men. At pretest, women scored significantly lower than men on subscales measuring rape supportive attitudes and adversarial sexual beliefs. At posttest, assessed 1-month later, women reported significant decreases on rape supportive attitudes. Results suggested that the program was potentially effective at reducing acceptance of interpersonal violence and adversarial sexual beliefs for women, but not for men. However, the researchers also observed that giving a pretest had a significant effect,

suggesting testing effects. One limitation of the study was that the researchers did not present the psychometric properties of the assessments used.

Lenihan and Rawlins (1994) conducted a study with a large sample of both fraternity and sorority members. The program was mandatory for all fraternity and sorority members attending the large university. There was also a control group that consisted of students enrolled in a health class. The prevention program consisted of a didactic presentation that included information on statistics and definitions of sexual assault. In addition, specific information was presented on the risks and responsibilities within the Greek system. Following the presentation, each sorority was paired with a fraternity for a small group discussion.

Results suggested that the program appeared effective in reducing scores on a measure of adversarial sexual beliefs for both male and female Greek members. Females endorsed significantly less adversarial sexual beliefs at both pretest and posttest. Men in the treatment group reported significantly less adversarial sexual beliefs when compared to men in the control group. However, the program was ineffective at changing attitudes of rape myth acceptance, sexual conservatism, or endorsement of interpersonal violence. Overall, males continued to endorse more rape supportive attitudes than women. Advantages of this study include a large sample size and mandatory involvement. Possible limitations include the lack of information presented on the psychometric properties of the assessments used and a high attrition rate.

Frazier, Valtinson, and Candell (1994) evaluated the effectiveness of a coeducational interactive rape prevention program. The program used a 2-hour theatrical production that depicted a rape scenario and then asked for the participants' feedback. A

second rendition was performed that incorporated the participants' feedback and depicted a scenario where rape did not occur. College counselors implemented the program with fraternity and sorority members. The researchers collected data at a 1-month follow-up and determined that participants' attitudes were improved regarding gender equality in the context of romantic relationships. They also concluded that the program was effective at increasing women's assertive communication and safety precautions. Strengths of this study included the use of a potentially high-risk population, a follow-up assessment, and several outcome measures. However, it should be noted that the majority of outcome measures used in this study were designed by the researchers and that limited to no psychometric properties had been established.

A study conducted by Black, Weisz, Coats, and Patterson (2000) evaluated the effectiveness of a theatrical and multimedia sexual assault prevention program. A unique contribution of this study was the inclusion of not only college students, but also faculty, parents, and community residents. The program was peer facilitated and consisted of a multimedia presentation illustrating the media's depiction of rape supportive attitudes. A theatrical performance with four different scenes were employed, each of which depicted a female being sexually assaulted. Each of the scenes was performed two times, the first time illustrating how not to respond to a sexual assault survivor and the second time illustrating more appropriate responses. This was followed by discussion groups. Results indicated that the program appeared effective at reducing adherence to rape myths and at increasing knowledge about sexual assault. In addition, of those participants who completed a pretest, posttest, and a 2-month follow-up, these results were maintained. However, for those participants who only completed a pretest and a posttest, no

significant changes were observed. Possible limitations to this study include high attrition rates as only 17 of the 100 participants completed the pretest, posttest, and follow-up assessments.

Lanier, Elliott, Martin, & Kapadia (1998) evaluated another theatrically based sexual assault prevention program. The program was based on a social learning theory model. The theatrical performance consisted of six different scenes that depicted a variety of situations related to sexual assault including the role of alcohol, verbal consent, nonconsensual touching, and empathy for sexual assault survivors. The study also included a control group. Results suggest that the treatment group endorsed significantly less rape supportive attitudes when compared to the control group. The researchers also noted that the program demonstrated effectiveness for those students who endorsed the most date rape tolerance at pretest. The results of this study are encouraging. However, it should be noted that this study was conducted at a small, "elite" university and pretest scores revealed that the majority of students already endorsed few rape supportive attitudes; this made it difficult for the researchers to assess change. Another limitation was that this study included no outcome measures for behavioral change and no follow-up assessment.

Forst, Lightfoot, and Burrichter (1996) conducted a study comparing the effectiveness of two types of prevention programs with undergraduate psychology and criminal justice students. One program consisted of a didactic presentation (not specified) and a video on sexual assault on college campuses. The other program was a theatrical production in which actors demonstrated situations that led to a male sexually assaulting a female. Following the performance, audience members were engaged in discussion and

asked for suggestions to avoid sexual assault. The actors then reenacted the scene and incorporated the participants' suggestions. Pretest results revealed that 24% of participants indicated that they had been victims of sexual assault and 46% indicated that they knew someone who had been sexually victimized. Only 1 participant admitted to forcing someone to have sex but 30% reported that they knew a person who had forced someone to have sex.

Results indicated that participants who had been victims of sexual assault had less rape supportive attitudes at all three assessment points (pretest, posttest, follow-up) and did not demonstrate any reductions in rape supportive attitudes. Participants in the didactic presentation group who indicated that they knew a victim of sexual assault demonstrated a significant decrease in rape supportive attitudes when compared to control group participants who knew an assault victim. No changes were observed for either the theatrical production group or the control group. Advantages of this study include the comparison of two prevention programs and the use of random assignment. Limitations of this study include a small sample size and the lack of a long-term follow-up.

Heppner, Humphrey, Hillenbrand-Gunn, & DeBord (1995) compared the effectiveness of a prototypic didactic video program with an interactive drama based prevention program. The researchers based the programs on an ELM theoretical foundation. The drama based prevention had performers depict a date that ends in rape. Participants then asked the performers (who remained in character) questions and were given the opportunity to rewrite the scene. During the second performance, the actors again depicted the date, this time incorporating the participants' suggestions. This study

also included a control group that participated in a stress management workshop. Data was collected at five time points: pretest, immediately following the prevention, a phone conversation with some of the participants 4 months following the pretest, and a follow-up assessment with just over half of the original participants 5 months following the pretest.

Results indicated that the drama group reported significantly more central route processing than the video group, who in turn reported significantly more central route processing than the control group. Overall, there were no differences between the three groups in terms of rape supportive attitudes. However, men in the video group endorsed significantly less rape supportive attitudes than men in the control group. They also observed a rebound effect of rape supportive attitudes, meaning that the decrease in rape supportive attitudes that followed immediately post prevention rebounded back to pretest levels at the follow-up assessment periods. There were no differences between the two treatment groups on rebound effects. Men in the drama group endorsed a significantly greater understanding of what constituted consent versus sexual coercion compared to men in the two other groups. No significant differences were found for females in terms of understanding consent versus sexual coercion. Finally, the researchers included several behavioral correlates including a participants willingness to volunteer time for rape prevention programs, the number of people the participants talked to about the program, the self-reported time spent thinking about the program, and their willingness to recommend the program to a friend. Of the total six behavioral indicators, the drama group scored significantly higher on four of them when compared with the other two groups. The finding that neither of the two prevention programs produced lasting change

on rape supportive attitudes is discouraging. The positive findings were that while attitude change was not maintained, behavioral and cognitive changes, especially for the drama group, appeared to be maintained at a 5-month follow-up.

Heppner, Humphrey et al. (1995) conducted a study on the effectiveness of a prevention program that consisted of a 1-hr presentation of statistics and effects of sexual assault, a video discussing information about sexual assault on college campuses, and a question-and-answer session. The researchers examined the amount of central route processing that occurred, as defined by ELM. Results suggest that, overall, females were more receptive to the information presented and found the information more relevant, indicating more central route processing. Conversely, males responded to more peripheral information such as the attractiveness of the presenter. Women indicated less rape myth acceptance than did men at pretest, immediate posttest, and a 2-month follow-up. However, both men and women showed a similar rebound effect of rape supportive attitudes wherein they reported significantly less acceptance of rape myths at immediate posttest than at pretest or follow-up. This indicates that the program may have been effective in reducing rape myth acceptance immediately following the prevention, but that these effects were not maintained over time. The researchers also speculated that participants may have been responding to demand characteristics (i.e. social desirability) at the immediate posttest.

This study also asked participants to record their thoughts during the prevention. Women tended to report more issue-relevant thoughts. The most frequent relevant thoughts women reported were a fear for personal safety, followed by a fear of other's safety, followed by time spent reflecting on their own past sexual assault. For men, the

most frequent relevant thoughts concerned fear for other's safety and reflection on other's past sexual assault. No males reported fear for their own safety or reflection on their own past sexual assault. The researchers suggest that future research may want to separate programs for men and women as there appears to pronounced differences in program effectiveness based on gender. One limitation of the current study is the lack of a control group.

Pinzone-Glover, Gidycz, & Jacobs (1998) evaluated the effects of a program aimed at increasing awareness and empathy towards rape victims and women in general. A unique contribution of this study was that in an effort to control for social desirability the researchers led the participants to believe that they were participating in two different studies. The pretest and posttest sessions were presented as a separate study that was focused on general judgments and attitudes. To further disguise the nature of the study, participants were given several distracter items such as depression and anxiety inventories. Following the posttest, only 2% of the participants indicated some knowledge of the true nature of the study.

The researchers used an hour long acquaintance rape prevention program that provided local statistics, distinguished rape myths from rape facts, discussed behavioral characteristics and attitudes common to rapists, and discussed methods for increasing women's safety. The comparison group participated in a program about sexually transmitted disease. This was chosen because some researchers have argued that any exposure to sexually related topics will alter scores on sexual assault assessment measures. Therefore, including a control or comparison group that pertains to sex will allow for a more accurate comparison with the treatment group.

Results suggest that the program was effective at increasing participants' empathy towards rape victims. Results also indicated that the program was effective at changing men's rape supportive attitudes and general attitudes toward women from pretest to posttest. In addition, men in the treatment group scored significantly different than men in the comparison group; no differences were noted for women. Also, men in the treatment group were more apt than the comparison group to accurately identify scenarios as rape; again, no differences were noted for women. The researchers explained the gender differences by pointing out that women in both the comparison and treatment groups already held more appropriate attitudes at pretest. Advantages of this study were that the researchers attempted to control for social desirability, used a comparison group that also focused on sexual issues, and used multiple outcome measures. A major disadvantage was the lack of a follow-up assessment.

Gidycz, Layman et al. (2001) conducted a follow-up study to the one conducted by Pinzone-Glover et al. (1998). They used the same program, an increased sample size, and included long term follow-up assessments. In addition to assessing attitudes, the researchers assessed for prior victimization or perpetration of sexual assault. At the follow-up, the researchers assessed for victimization or perpetration of sexual assault since the prevention. The follow-up assessment was conducted at the end of the academic quarter, 9-weeks following the program. Results indicated that participation in the treatment group did not appear effective at reducing victimization or perpetration. In total, 21% of females involved in the study reported having been sexually assaulted during the academic quarter. 8% of men involved in the study admitted to having perpetrated acts of sexual violence during the quarter. There were no differences between

the treatment and comparison groups. Additionally, results suggested that men who reported a history of sexual assault perpetration prior to the study were three times more likely to have admitted to committing sexual assault during the academic quarter. Also, women who had been sexually victimized prior to the study were more likely to have been victimized during the academic semester.

In terms of attitudes, the researchers found no group differences between the treatment and comparison group on attitudes towards women or on victim empathy. However, they did observe that women endorsed less rape supportive attitudes than men. They also observed that those in the treatment group endorsed less rape myth acceptance than those in the comparison group. However, the effect was somewhat small.

The results of this study are obviously discouraging. The researchers stated that participants left the program reporting that they found it useful and informative but apparently did not find the information salient. The researchers suggested that future research may want to use separate programs for men and women in an effort to make the information more salient and personalized. They also pointed out the need to address college students' illusions of invulnerability. Finally, the researchers mentioned that participation in the study may have made women more likely to report things as sexual assault that they might not have labeled as such before participation. They also questioned whether men may have underreported sexual assault perpetration after learning that their behavior was considered illegal. Despite the discouraging results, this study had many strengths including a large sample size, a follow-up assessment, and a focus on actual behavior as opposed to simply assessing attitudes. In addition, this study was a follow-up of a previous study, thus allowing for more detailed examination of a

specific program's effectiveness. One possible limitation was that the researchers in this study did not exactly replicate the previous study. For example, researchers did not attempt to control for demand characteristics and the comparison group was given a handout on sexual assault as opposed to participating in a program regarding sexually transmitted diseases.

Prevention Programs Conducted with Adolescents

Few studies have been conducted with younger adolescent participants. Feltey, Ainslie, and Geib (1991) conducted a study examining the effectiveness of rape education with high school students. The researchers also examined students' attitudes towards sexually coercive behavior in situationally specific scenarios such as "she is wearing sexy clothes" or "he spent \$20-\$40 dollars." The prevention program consisted of a 45-min presentation on sexual assault from an experienced rape educator. Pretest results found that gender played a significant role in each situational variable with males reporting more support of sexually coercive behavior across situations. They also found that age had a significant negative relationship with money spent, meaning that younger individuals were more likely to support sexually coercive behavior if the male spent more money. In general, it appeared that the younger the participants were, the more likely they were to support the use of sexual coercion when the behavior of the female was called into question. It is also worth noting that under no circumstances did participants endorse sexually coercive behavior when the female physically and/or verbally protested.

Posttest results indicated that the program appeared effective at reducing rape supportive attitudes. However, males continued to endorse sexually coercive behavior in certain situations: when a female was willing to go to an unsupervised location and when there was an established sexual relationship. The researchers conclude that prevention programs should be conducted with both males and females, that males should be given specific communication skills training to discuss consent, and that programs should focus on gender role socialization as males still continued to endorse sexually coercive

behavior when occurring in the context of established relationships. Finally, the researchers argue that prevention programs should be conducted with younger adolescents as age was such a strong predictor in their study. Strengths of this study include the use of younger participants and the focus on situationally specific scenarios. Possible limitations include the lack of a follow-up assessment and that the posttest was only conducted with a select group of the total sample and the follow-up group was not sampled via random selection.

Smith and Welchans (2000) conducted a study on the effectiveness of a peer-education program with 10th through 12th grade high school students. The 45-minute presentation, titled "First Step Peer Education Project," consisted of statistics and definitions of sexual assault, rape myths, risk-reduction strategies, and tips on how to help a friend who had been sexually assaulted. Although participants consisted of both males and females, the program was specifically aimed at men. Results indicated that the program was effective at reducing rape supportive attitudes. Females reported less rape supportive attitudes before and after the program. At posttest, males demonstrated a more dramatic improvement in rape supportive attitudes. Participants were also asked to evaluate the presentation. Overall, females rated the program more favorably than males. In addition, more favorable evaluations were positively correlated with the outcome measure, indicating that those participants who endorsed the program also had less rape supportive attitudes at posttest. However, when these results were examined by gender, the researchers found that males had an inverse correlation between program evaluation and outcome scores, indicating that those males who rated the presentation more favorably endorsed more rape supportive attitudes. The opposite was found for females.

Considering that, overall, the program appeared effective for males the implications of this finding are somewhat unclear. Limitations of this study include the lack of a control or comparison group, the use of measures without any demonstrated reliability or validity, and no follow-up assessment.

Pacifici, Stoolmiller, and Nelson (2001) conducted a study with 10th grade students at two Pacific Northwest high schools. The program, titled *Dating and Sexual Responsibility* consisted of three 80-min presentations conducted over 10 days. The program combined multimedia presentations with classroom activities including discussion and role plays. Specific targets of the program included identifying sexually coercive behavior, identifying rape myths and general rape supportive attitudes, and strategies to promote positive social skills related to dating behavior. Initial analysis suggested that the program was not effective at reducing participants' acceptance of sexually coercive attitudes. However, further analysis revealed that the program was only effective for those students whose pretest scores indicated high acceptance of sexually coercive attitudes. Therefore, it appears the program was effective for those students most in need, but did not produce meaningful change for students who did not have high endorsement of sexually coercive attitudes at pretest. Strengths of this study included the use of sophisticated statistical analysis and the use of computerized assessments. Limitations include the lack of a follow-up assessment.

Weisz and Black (2001) conducted a study on the effectiveness of an after school prevention program conducted with 7th grade low income African American students attending an urban school, a school consisting almost exclusively of African American students. The program was conducted over the course of a semester and consisted of 12

one and a half hour long presentations and was facilitated by African American college and graduate students. Participation in the after school program was mandatory for all 7th grade students, but participation in the study was voluntary. As a result, of the 250 students involved in the program only 65 (24%) were included in the analysis. The program was composed of information regarding sexual assault and gender roles. In addition, the program included information considered relevant for low income African American teenagers. The program consisted of didactic presentations, role-plays, discussion groups, and classroom exercises. The classes were separated by gender, with male facilitators leading the male groups and females leading the female groups.

Results indicated a significant increase in knowledge from pretest to posttest. A 6-month follow-up revealed that students in the treatment group indicated greater knowledge about sexual assault than did students in the control group. In terms of attitudes, results indicated that those students in the treatment group had less adherence to rape supportive attitudes than did students in the control group and these differences were maintained at the follow-up. In fact, results revealed that those students in the treatment group scored higher on the outcome measure (indicating less rape supportive attitudes) while the scores of students in the control group fell. Advantages of this study include the use of low income, African American students and the use of culturally relevant material. Limitations include a small sample size, high attrition rates, and no random assignment. In addition, although the researchers indicated that they included measures of incidence rates, these findings were not reported.

Foshee et al. (2004) reported results of a long-term study that examined the effectiveness of the Safe Dates Program aimed at adolescents. The original study was

conducted in 1994 and follow-up assessments were conducted every year for 4 years. In addition, a booster session was conducted roughly 3 years following the original program. The original program was conducted with participants while they were in the 8th grade. The Safe Dates Program is a school-based program aimed at preventing and reducing dating violence among adolescents. It consists of a theatrical presentation, ten 45-min curriculum sessions conducted by health educators, and a poster contest. The researchers reported that roughly 65% of the participants' parents agreed to let their children continue in the study following the original program. The booster session was conducted with half of the original sample. It consisted of a worksheet and a phone contact from a program facilitator.

At the 1-year follow-up, the researchers noted that while the cognitive effects of the program had been maintained, the behavioral effects were not maintained. However, at the 4-year follow-up behavioral change was present. Results suggest that 4 years following the original program, those who participated in the Safe Dates Program without the booster session reported significantly less perpetration of physical or sexual violence when compared to the control group. Also, the researchers concluded that physical victimization was moderated by previous victimization. Further examination revealed that the program appeared effective when previous physical abuse was moderate or high. The researchers concluded that the program appeared equally effective for males and females and whites and non-whites. Overall, results showed a 56% to 92% reduction in victimization and perpetration. They also noted that the booster session did not appear to be effective. The primary strengths of this study include the use of a long-term follow-up assessment and a focus on younger adolescents. Possible limitations include limited

generalizability as the sample consisted of students in a rural area of North Carolina. In addition, females had much lower attrition rates than males

Conclusions and Future Directions

Participants

A total of 47 studies were reviewed, 45 implemented qualitative designs. Of these, 27% (n= 12) were conducted with college males, 18% (n= 8) were conducted with college females, 44% (n=20) were conducted with college males and females, and 11% (n= 5) were conducted with younger adolescents.

Males

Overall, 11 of the 12 qualitative studies conducted with college men revealed positive or mixed results in reducing rape supportive attitudes, increasing victim empathy; increasing knowledge, improving behavioral intentions, and/or improving attitudes toward women. Of the five studies that included a long-term follow-up assessment, two (Foubert, 2000; Gilbert et al., 1991) observed maintaining change and two others (Foubert & Marriott, 1997; Heppner et al., 1999) showed partial maintaining change. Of the five studies to include some measure of behavioral change, two revealed a change in behavioral intentions (Foubert & McEwen, 1998; Foubert, 2000) and one revealed partial demonstration of desired behavioral correlates (Gilbert et al., 1991). All four of the studies that included "high risk" males found positive or mixed results (O'Donohue et al., 2003; Schewe & O'Donohue, 1993b; 1996; Stephens & George, 2004). The only study to include an outcome measure of sexual assault perpetration (Foubert, 2000) observed no differences in the prevalence of sexually coercive behavior. Only one study had findings to suggest an adverse reaction to sexual assault prevention programming (Berg et al., 1999).

Fraternities

There is no clear evidence whether or not it is advantageous to specifically target fraternity members, despite the common sense logic to do so. All of the five fraternity-only studies yielded at least some support for the prevention. Based on this review, there does not appear to be any reason to suspect that fraternity members are any less capable of changing rape supportive attitudes than college men in general.

Females

Of the eight qualitative studies conducted exclusively with college females, six yielded positive or mixed results in reducing rape supportive attitudes, increasing victim empathy, increasing knowledge, improving behavioral intentions, and/or improving attitudes toward women. Of the six studies to include long-term follow-up assessments, three demonstrated desired or partially desired maintaining change or desired behavior (Gidycz, Lynn et al., 2001; Hanson & Gidycz, 1993; Marx et al., 2001). Of the six studies to include rates of victimization or revictimization, three yielded partially positive results (Gidycz, Lynn et al., 2001; Hanson et al., 1993; Marx et al., 2001). None of the studies reviewed yielded a clear reduction in victimization, although one study demonstrated a reduction in victimization for females without a history of sexual assault (Hanson et al., 1993). In addition, one study yielded some partial indications of reducing revictimization (Marx et al., 2001). All of the studies that included a measure of victimization history indicated that those women with a history of sexual assault victimization were more likely to be revictimized.

Mixed-Gender

All 20 of the preventions conducted with college males and females demonstrated either positive or mixed results in reducing rape supportive attitudes, increasing victim empathy, increasing knowledge, improving behavioral intentions, and/or improving attitudes towards women. Of the 12 studies that included either a follow-up assessment or a delayed posttest, only three indicated a complete rebound effect (Anderson et al., 1998; Heppner, Good et al., 1995; Heppner, Good et al., 1995). Only 1 of the 20 studies included an outcome measure of victimization or perpetration rates and found the program to be ineffective at producing change (Gidycz, Layman et al., 2001). However, two studies found partial support for desired behavioral correlates (Heppner, Good et al., 1995; Rosenthal et al., 1995). It should be noted that five of the studies indicated that either males or females had significant changes, but not both (Harrison et al., 1991; Heppner, Good et al., 1995; Heppner, Humphrey et al., 1995; Lenihan et al., 1992; Schwartz & Wilson, 1993). This suggests that these prevention programs had differential effectiveness based on gender. In addition, several studies found different response patterns based on gender, typically with males endorsing greater rape supportive attitudes.

Adolescents

All five programs conducted with pre-college adolescents demonstrated positive or mixed results on reducing rape supportive attitudes, increasing knowledge, and in decreasing instances of sexual assault victimization or perpetration. In fact, the only study reviewed that demonstrated an overall decrease in the incidents of victimization and/or perpetration was Foshee et al.'s (2004) evaluation of the Safe Date's Program. Both of

the studies that included a follow-up assessment indicated that the desired effects had been maintained (Foshee et al., 2004; Weisz & Black, 2001).

Format

There are no clear conclusions on which formats are most effective. Preventions using didactic presentations, discussion groups, videos, and theatrical performances have all been used independently or in combination and all have demonstrated some success. One component that appears promising is the use of peer facilitators.

The overwhelming majority of studies used one-time preventions that typically lasted 30 min to 2 hours. Only 7 of the 45 quantitative studies used programs that lasted for more than 1 day (Dallenger & Rosen, 1993; Foshee et al., 2004; Heppner et al., 1999; Lonsway et al., 1998; Marx et al., 2001; Pacifici et al., 2001; Weisz & Black, 2001) and one of those studies was actually a human sexuality course (Dallenger et al., 1993) and another was a training program for peer facilitators (Lonsway et al., 1998).

Outcome

There are also no clear conclusions on which prevention program components are crucial or most effective. Almost all of the preventions attempted to change attitudes (e.g. acceptance or rape myths, attitudes towards women, acceptance of interpersonal violence) and generally found at least partial short-term effectiveness. The majority of programs also attempted to increase knowledge about sexual assault (e.g. statistics, definitions, myths versus facts) and again generally found at least partial success. Several studies demonstrated some success at increasing victim empathy and a few studies targeted behavioral intentions or behavioral correlates of anti-rape supportive behaviors with partial success. However, very few studies have demonstrated any success

at reducing the rates of sexual victimization and/or perpetration. One finding that is worth mentioning is the support for ELM-based preventions or other efforts to increase the personal relevancy or saliency of the preventions. This concept is logical and studies have generally demonstrated its utility.

Limitations

There are several limitations of this review. First, this review only included studies that were published in peer-reviewed journals. It is highly likely that this limitation resulted in an overrepresentation of studies that found positive results, commonly referred to as *publication bias*. Secondly, this review was limited to studies published between 1990 and 2005. This decision was made because the conceptualization of sexual assault has changed dramatically from 20 years ago, moving away from the notions that sexual assault is typically done by strangers. In addition, a brief review of the literature only yielded a handful of studies published prior to 1990 that would have otherwise been appropriate for this review. Finally, due to the cultural changes over the last 15 years, it is unclear if earlier findings would even be applicable or relevant today. Nonetheless, it is possible that earlier studies may have added to the representativeness of this review. Lastly, although a thorough review of the literature was conducted, using search databases such as PsycINFO, PsycArticles, Academic Search Elite, ERIC, MEDLINE, and Social Science Abstracts, as well as reviewing reference sections from other articles and previous reviews it is highly possible that some studies were missed.

Future Directions

Before improvements in sexual assault prevention programming can be made, a few methodological issues must be addressed. First and foremost, new or revised

assessment measures must be created. Several authors (e.g. Lonsway, 1996; Pinzone-Glover et al., 1998; Schewe & O'Donohue, 1993) have expressed concerns that the common assessments used are outdated or are generally ineffective. Limited research has been conducted to determine the reliability and validity of these assessments. Further, several researchers are commonly using modified versions of assessment devices without testing or reporting the psychometric properties of these modified versions. A concise effort must be made to create psychometrically sound assessment devices in order to accurately assess the effectiveness of any sexual assault program.

In addition, it is surprising that so few studies include measures of sexual victimization and/or perpetration as this is the ultimate goal of any prevention program. Future research would benefit from including measures of sexual assault histories and incident rates following the program. This of course mandates that prevention programs utilize follow-up assessments. Less than half of the studies reviewed included a follow-up assessment. With ample evidence to suggest that positive results of prevention programs are often not maintained over time, it appears fruitless to conduct a prevention program without a long-term follow-up.

Other methodological issues that should be further researched include the various threats to internal validity discussed throughout this review. This includes assessing and controlling for social desirability or other demand characteristics, selection bias, assessing testing effects (including practice or priming effects), adequate sample size, sampling procedures, random assignment, and assessment of individuals who prematurely dropout of the studies.

Population

There is no clear evidence that targeting males, females, or both produces better results. It does seem clear, however, that males must be included in prevention programming. Due to the finding that males and females commonly react differently to prevention programs it is likely that the most effective prevention programs will work with males and females separately, at least for a portion of the program.

Although future studies will likely continue to focus on college students, there is some evidence to suggest that targeting a younger population may yield better results, especially because prior victimization had such a profound impact on risk for future victimization and a large percentage of females already reported victimization by the time they participated in the college-based prevention programs. In addition, studies with more diverse populations must be conducted. This should include, but not be limited to individuals with various ethnic backgrounds, "high risk" individuals, socioeconomic statuses, sexual orientations, family structures, and non-students.

Program Design

In order to limit selection bias and other sampling problems, the use of mandatory involvement programs appears promising. If done in conjunction with academic curricula, programs will likely obtain a greater and more representative sample size, in addition to lower attrition rates.

The development and implementation of programs conducted during several sessions over longer periods of time is much in need. Due to the common finding that positive programming effects are not often maintained, a longer more intensive program may yield more positive results. This suggestion is bolstered by the findings of Yeater

and O'Donohue (2002), which suggested that participants only learned the information after repeated exposure.

Actual program content is still an area that is not well understood. Although several studies have attempted to compare different types of programs, generally the findings are mixed or largely un-interpretable due to methodological problems. Future research must improve study designs in order to more accurately compare the effectiveness of various program components.

One suggestion is to include more experiential learning opportunities for program participants. This may allow for more central route processing, as described by ELM. This could be accomplished through techniques such as role-plays, participant class presentations, research projects, field-trips, participating with rape recovery organizations or rape prevention projects, or perhaps even having participants teach their newly acquired information to a different group of individuals such as peers or younger adolescents.

As previously mentioned, it is essential that assessments be improved in order for study findings to have any interpretability. Further, studies must include some form of behavioral outcome measure, preferably including a measure of victimization and/ or perpetration. Currently, the research is not consistent enough to say with any confidence that simply assessing attitude or empathy changes will be indicative of changes in sexual assault incidences; if anything the research supports the contrary. Finally, in order for findings to be meaningful, the inclusion of at least one long-term follow-up assessment is necessary.

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